

TEACHERS' RETIREMENT BOARD

INVESTMENT COMMITTEE

SUBJECT: Revised Investment Policy and Management Plan
And Investment Resolution

ITEM NUMBER: 8

ATTACHMENTS 3

ACTION: X

DATE OF MEETING: July 10, 2002

INFORMATION:

PRESENTER: Christopher Ailman

Executive Summary:

Commencing with the beginning of the new Fiscal Year, the investment staff is called upon by the Committee's objectives to recommend changes to the Investment Policy and Management Plan. The revised Policy is included as **Attachment 1** for your consideration. The additions to the policy have been underlined and deletions have been struck. Once approved a final version will be distributed to the Board and all interested parties.

The second item, **Attachment 2** in the packet, is the CalSTRS Investment Resolution. This document represents the "approved list" of investments. The list was last revised in 1994 and needs to be updated.

Discussion:

INVESTMENT POLICY & MANAGEMENT PLAN

The major additions revolve around expanding the risk standards and adjusting to the new benchmarks previously approved by the Board. The additions to the risk section were discussed at the May Investment Committee meeting, when staff presented the comprehensive review of the NAPP / NCTR Key Risk Standards. The remaining changes generally comprise format changes.

Expansion of the risk section was contemplated in last years plan and in the Committee's objectives. At the May 1, 2002, meeting staff presented a comprehensive report on the APPFA / NCTR Key Risk Standards¹. Many of the steps to manage or mitigate the risks identified by the study were already incorporated within the CalSTRS plan. However, as discussed and recommended by staff, a clear delineation of the risk mitigation plan would enhance the Fund's Investment Policy.

¹ Public Pension Systems; *Statement of key Risks and Common Practices to Address those Risks*, July 2000

The suggested changes and additions strive to meet this desire. Clearly the past year of corporate failures has highlighted the need for clear policies and strong statement about the management and tolerance for risk within an investment portfolio.

INVESTMENT RESOLUTION

The Investment Resolution was last revised on May 11, 1994. The document originated in 1984 after the electorate of California approved Proposition 22 in 1982, that removed the old Legislative legal lists and required pension plans to be prudently managed and diversified. Since the Fund had always operated on an approved list of investments, the Board created it's own to guide the investment program. Over the years the Investment Policy and management plan has encompassed more and more of the investment parameters and now the two documents serve to compliment each other.

Since the last revision was eight years ago the document needs to be modernized to incorporate the changes to the Investment Policy and the individual asset class policies. Staff has suggested the use of broad language that is more inclusive and fitting of the current investment environment. The description of private equity and real estate, which were the most recent changes, serve as an example of creating inclusive vs. exclusive descriptions. Staff is also suggesting the deletion of any reference to non-U.S. fixed income since it is no longer part of the investment program. This area was left over from the global tactical asset allocation program.

This document is provided in all the investment management contracts to provide comfort that the board has authorized the respective investment segment. With the depth of the Investment Policy, the individual asset class policies, and the annual business plans, the type, style, and structure of each investment area have a clear boundary and objective.

Prepared and recommended by:

Christopher J. Ailman
Chief Investment Officer

CalSTRS

CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM

Investment Policy and Management Plan

INVESTMENT BRANCH

~~NOVEMBER-JULY~~

2002 ~~2001~~ |

CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM

7667 Folsom Blvd., Room 250
Sacramento CA 95826

INVESTMENT POLICY and MANAGEMENT PLAN

EXECUTIVE SUMMARY

The California State Teachers' Retirement Board (Board) believes that to manage growth of assets in a prudent manner, it is necessary to establish a clear Investment Policy and a planning statement in the form of an Investment Management Plan under which the Investment Branch will operate. The Board has sole and exclusive fiduciary responsibility to administer the investment assets in a manner that will assure the prompt delivery of benefits and related services to the plan participants and their beneficiaries. As a public pension fund, the California State Teachers' Retirement System (CalSTRS) is not subject to ERISA that governs corporate pension plans. ~~The CalSTRS investment decision-making criteria is~~ decision-making criteria are based on the "prudent expert" standard for which the ERISA prudence standards serve as a basis. Additionally, The California Constitution Article 16, Section §17, and the California Education Code, Part 13 Teachers Retirement Law chapter 4, section §22250 require diversification of risk across asset classes and minimization of employer costs.

~~The Investment Policy and Management Plan document represents the most recent update of CalSTRS' Investment Management Plan.~~ The Investment Policy and Management Plan have been developed within the context of the significant events that have occurred during CalSTRS' eighty-five year history. The CalSTRS Investment Management Plan is updated to reflect the changes that have occurred in the Investment Policy and strategy as a result of implementing approved programs. In addition, the Investment Policy and Management Plan is updated to ensure that the factors that impacted initial decisions are still relevant in the current environment.

This document addresses general objectives governing the policies of the investment function and specific performance objectives. The general objectives are meant to provide a framework for the operation of the investment function. CalSTRS' performance objectives can be divided into objectives for the overall investment function and objectives for investment managers.

The asset allocation decision governs the allocation of CalSTRS' assets between public and private, fixed income and equity. Strategic allocation of CalSTRS' assets is the most important factor in the determination of the realized total rate of return. The Board, investment staff, and the general consultants worked together to create a variety of optimal asset allocation alternatives. The Board has adopted the desired targets and set tight ranges around those targets to control risk and ensure the proper allocation of the portfolio.

Strategic asset allocation targets are established within a variety of sub-asset categories to achieve the identified performance objectives. In conjunction with the overall asset allocation targets, sub-asset class level tactical ranges provide flexibility to adapt to changing market conditions.

Subsequent to the establishment of strategic asset allocation targets, an investment structure was designed to guide and direct investment decisions. Investment related issues addressed included:

1. The Funds' overall investment objectives, risk tolerance and performance standards.
2. The relative amount of active and passive management within each asset class.
3. The relative amount of internal and external management.
4. The appropriate direct and indirect costs of each asset category.
5. The appropriate reporting standards and time horizons.

CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM

Investment Policy

STANDARD OF CARE:

Under California Constitution Article 16, Section §17, and the California Education Code, Part 13 Teachers Retirement Law chapter 4, section §22250, the board has the sole and exclusive fiduciary responsibility over the assets of the retirement system. The retirement board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the members and their beneficiaries. The assets of the retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system.

The members of the retirement board of the retirement system shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, members and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. The retirement board's duty to its members and their beneficiaries shall take precedence over any other duty.

The CalSTRS retirement board shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

GENERAL INVESTMENT OBJECTIVES:

The main goal for The California State Teachers' Retirement System is to "maintain a financially sound Retirement System". Within this context and in conjunction with the State Constitution and State Education Code the following general investment objectives are designed to establish a framework for the operation of the investment portfolio.

1. **Provide for Present and Future Benefit Payments.** CalSTRS' investment program shall provide liquidity to pay benefits to its participants and their beneficiaries in the amounts and at the times called for through the investment of contributions and other fund assets and strive to meet the assumptions built into the actuarial model and strive to maintain a fully funded pension system.
2. **Diversify the assets.** Seek to diversify the assets to achieve the desired rate of return at a prudent level of risk. The asset structure must provide for diversification of risk between asset classes to manage the risk/return relationship through strategic asset allocation.

3. **The reduction of CalSTRS' funding costs.** Within prudent levels of risk, the reduction of CalSTRS' funding costs shall be a consideration in the organization and structure of the investment portfolio.
4. **Maintain the trust of the participants and public.** Manage the investment program in such a manner that will enhance the member and public's confidence in the CalSTRS investment program.
5. **Establish Policy and Objective Review Process** - A formal review of the CalSTRS Investment Policy and management Plan will be conducted annually, with an updated financial projection developed every two years.
6. **Create Reasonable Pension Investments Relative to Other Pension Funds.** The selection of investment vehicles and policies will be judged against other private and public pension funds. Investment performance, asset management costs, staffing and overall expenses will be compared to other public and corporate pension plans, with special emphasis on comparisons with other large public funds.
7. **Minimize costs.** Management fees, trading costs, and other expenses will be aggressively monitored and controlled.
8. **Compliance with State and Federal Laws.** The investment program must operate in compliance with all applicable State and Federal laws and regulations concerning the investment of pension assets

INVESTMENT PERFORMANCE OBJECTIVES

The general investment objectives designed a framework for the operation of the investment function. The performance objectives can be divided into three components: (1) performance objectives for the overall investment portfolio, and (2) performance objectives for each asset class, and 3) performance objectives for the individual investment managers within each asset class. CalSTRS incorporates all three levels of analysis in its monitoring of the investment portfolio performance.

In 2001, a survey of the Board members confirmed the Board's primary objective is to meet the actuarial assumptions and to strive to maintain a fully funded pension plan. Further, the Board reaffirmed its focus on a long-term investment horizon of 10 years. As a long-term pension plan, the Board emphasizes that the primary time horizon for measuring investment performance will be over a three, five and ten year period rather than quarter to quarter or year to year.

There are four performance objectives identified for the overall investment portfolio:

1. Relative to Strategic Asset Allocation Targets
2. Relative to Inflation
3. Relative to the Actuarial Rate of Interest
4. Relative to CalSTRS' Liabilities

The first objective identifies a comparative benchmark that reflects CalSTRS' unique asset allocation policy. This performance objective is a composite of the target weighting for each asset category multiplied by the performance benchmark's return for that category. This performance number is compared to the actual asset allocation and actual total rate of return. This comparison identifies the contribution or detriment to performance caused by manager performance, market timing, and tactical asset allocation decisions.

The inflation related objective compares the investment performance against the rate of inflation as measured by the Consumer Price Index (CPI) plus 3.5 percent. The Consumer Price Index is used in the calculation of the estimated salary increases for the members (teachers). The inflation measure provides a link to CalSTRS' liabilities.

The actuarial rate of interest is reviewed and monitored as a measure of the long-term rate of growth of CalSTRS' assets. The current actuarial rate of interest is 8.0%. When adopting the actuarial rate of interest, the Board anticipates the investment portfolio may achieve higher returns in some years and lower returns in other years.

The liability related performance objective recognizes that liabilities must be paid in full and in a timely manner. The liabilities are future claims of the CalSTRS' participants. The actuarial rate of interest is used to discount the future value of the CalSTRS' liabilities to calculate the funded ratio.

PERFORMANCE BENCHMARKS

To facilitate the periodic reporting to the Investment Committee and to provide a relative measure to gauge success, custom performance benchmarks are approved by the Board. The approved custom performance benchmarks are shown below:

<u>Total Public Equity</u>	- Weighted blend of the S&P 500 Index ex Tobacco plus the Russell Special Completeness Fund <u>Russell 3000 Index</u> ex Tobacco combined with the the (Provisional) MSCI ACWI ex U.S. Index ex. Tobacco.
U.S. Equity	- Weighted S&P 500 Index (large cap stocks) ex tobacco and Russell 2500 Special Completeness Index (small cap stocks) <u>Russell 3000 Index</u> ex tobacco.
Non-U.S. Equity	- (Provisional) MSCI ACWI ex US Index ex tobacco
<u>Total Public Debt</u>	- Salomon Large Pension Fund <u>Lehman Brothers U. S. Aggregate and High Yield cash pay</u> -Index ex tobacco
U.S. Dollar denominated Debt	- Salomon Large Pension Fund <u>Lehman Brother U.S. Aggregate</u> Index ex tobacco
<u>High Yield Debt</u>	- <u>Lehman Brothers Cash Pay Index</u> ex tobacco
<u>Private Equity</u>	- Weighted blend of the NCREIF Property Index and the Custom Alternative Investment Index
Real Estate	- NCREIF Property Index
Alternative Inv.	- Custom Alternative Investment Index

Blended indices are weighted based upon the CalSTRS target allocations to each respective index.

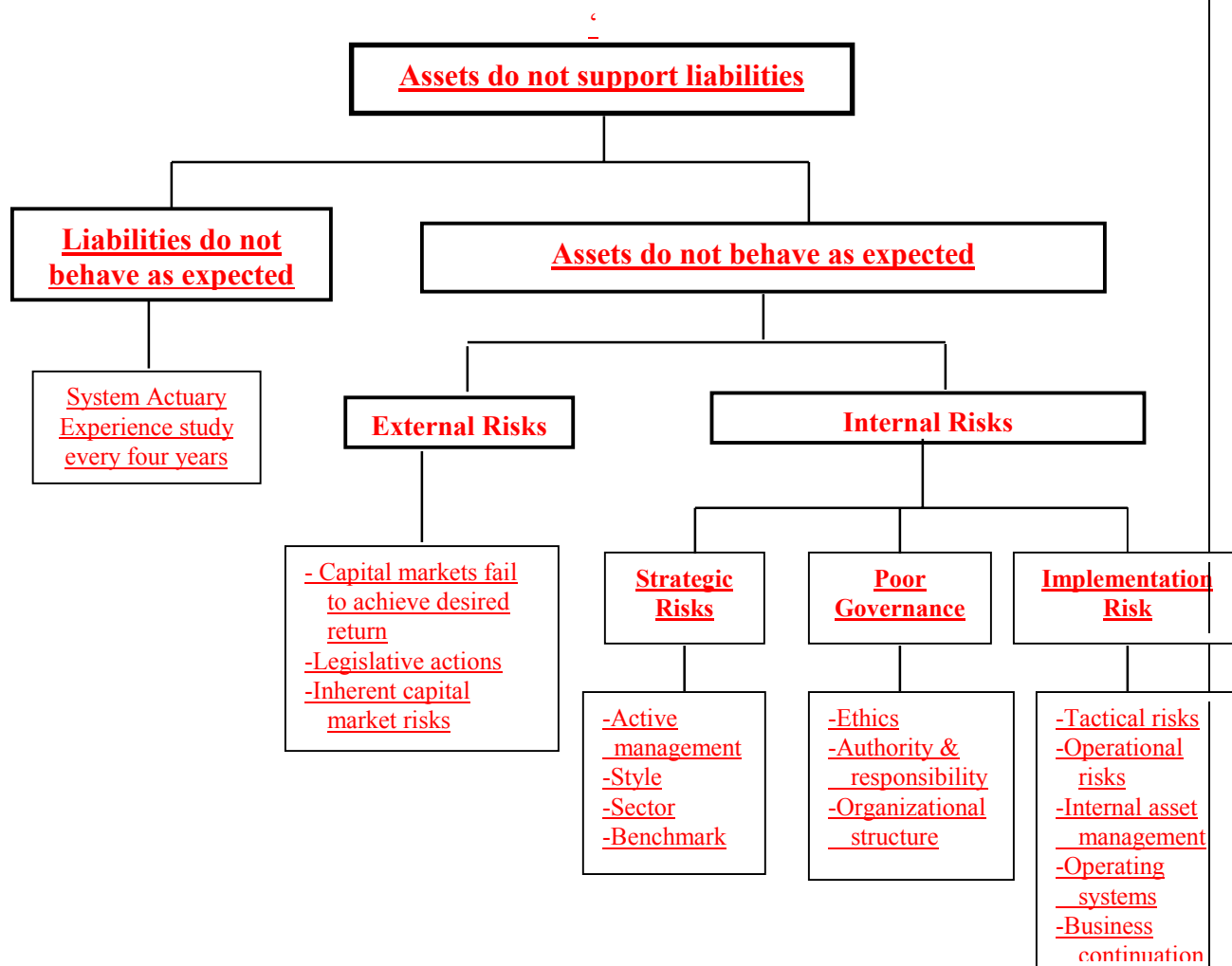
Each investment manager, for U.S. and Non-U.S., equity and fixed income, has an individualized benchmark designed to measure its performance relative to the objective identified in each manager's respective investment guidelines.

RISK CONSTRAINTS:

The CalSTRS investment portfolio will be invested to maximize return at a prudent level of risk in accordance with the CalSTRS Investment Policy, the California Constitution, and the Education Code.

RISK STANDARDS

CalSTRS has utilized the “Statements of Key Investment Risk and Common Practices to Address Those Risks”, June 2000, which is endorsed by the NCTR¹, GFOA², and APPFA³. These standards promulgate a risk framework listed below:



¹ National Council on Teacher Retirement;

² Government Finance Officers Association

³ Association of Public Pension Fund Auditors

|

External risk - External risks are embedded and inherent within the capital markets. This policy defines the Fund's strategy and process to capture or in turn mitigate these risks.

Governance risk - Governance risk is mitigated within the Board's policy and the individual asset class policies. Roles and assignments are clearly stated in each policy.

Strategic investment risk & implementation risks - This Policy is designed to mitigate the strategic investment risk and implementation risks of the investment activity. A critical element to mitigate these risks is the asset allocation and sub-asset structure of each asset class. The Board has adopted target allocations and tight ranges to control and limit the strategic and tactical risk in the portfolio. To control the active manager style, sector and benchmark risks, the Board has delineated guidelines and structure through the asset allocation plan and equity manager policies and guidelines.

RISK BUDGET

The asset allocation plan incorporates a "risk budget: in a broad sense. In CalSTRS view the public markets of U.S. equity, U.S. fixed income and to a lesser extent Non-U.S. equity, as fairly efficient market. Information is disseminated quickly and new information is quickly absorbed into the market prices of a given security. As a result, CalSTRS utilizes a more passive management style. The less efficient the investment the greater exposure to active management and hence the larger exposure to style, sector, and management risk.

In the less liquid and inefficient asset classes of high yield fixed income, private equity, and real estate, the Fund utilizes a complex active management style to capture the greater opportunity set offered by the larger risks.

TOTAL FUND RISK

Liquidity Risk

No more than 30% of the total fund shall be invested in instruments that are not regularly publicly traded on a daily basis.

Maximum Investment

No more than 3% of the total fund shall be invested or exposed to any one security or corporation, with the exception of United States Treasury or Agency Obligations. No more than 15% of any asset class may be invested in any one security, with the exception of United States Treasury or Agency Obligations.

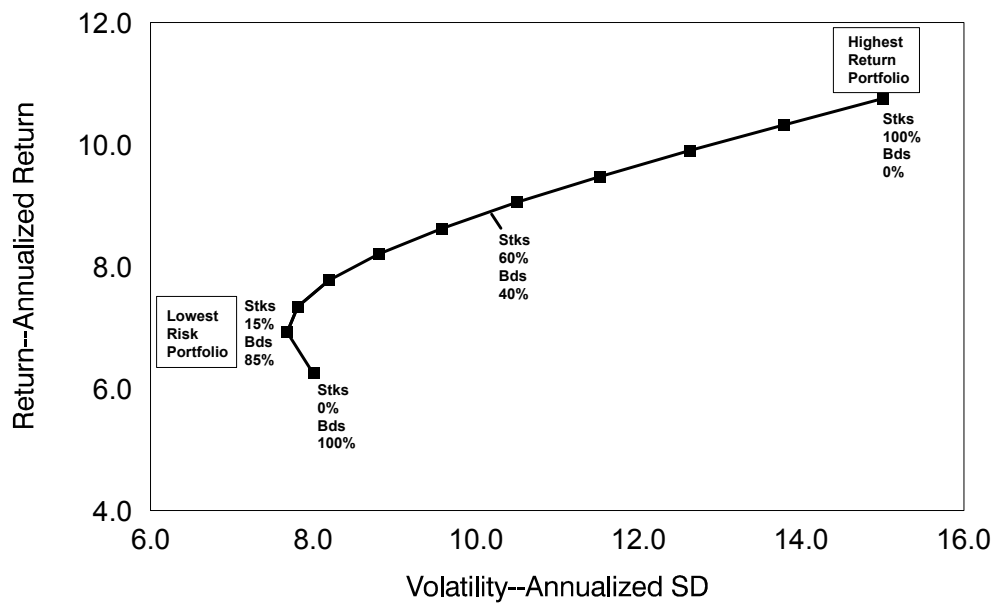
ASSET ALLOCATION

A Review of Asset Allocation

A diversified investment portfolio consists of multiple asset classes whose investment returns respond differently to varying economic scenarios. Diversified portfolios are attractive because the combination of various asset classes can reduce expected risk while maintaining expected return. Combining assets having different return patterns can produce a portfolio that has much lower volatility (risk) than any individual asset while producing returns that are competitive. Maximizing return while reducing risk increases the probability of meeting a specified return objective.

Efficient frontier analysis is a widely accepted method of analyzing the tradeoff between risk and return across portfolios having different mixes of assets. Through this quantitative technique (which relies on several critical assumptions), an optimization process identifies portfolios of assets providing the highest expected return, given a specified level of risk. The procedure continues to determine ideal portfolios at varying levels of risk until an entire range of ideal portfolios (termed an “efficient frontier”) is identified below.

An Efficient Frontier for a Stock and Bond Portfolio



Asset Class	Expected Annual Return	Expected Annual Volatility
Domestic Stocks:	9.75%	18.0%
Domestic Bonds:	6.25%	7.0%
Stock-Bond Correlation:	0.30	

In selecting certain combinations of assets (such as domestic equity and fixed income) any rational investor will always consider the tradeoff between changes in return and changes in risk. At a minimum, investors should expect to receive a higher rate of return for an incremental increase in investment risk.

Each mix of assets is, in itself, a unique asset having its own return vs. risk tradeoff. As highlighted above, these asset portfolios can exhibit return patterns that differ greatly from any underlying asset. Depending on the extent of how individual assets move in relationship to each other (measured by correlation), certain mixes of assets could enhance the return-risk tradeoffs over investing in any single asset.

The curve-point in the curve in the efficient frontier chart shows when adding a certain proportion of stocks ceases to add value (simultaneously adding return and reducing risk). This point comes when stocks become 13% of the portfolio. Beyond this point, the only way to increase return is to increase risk incrementally. For those points along the line past the curve point, the only decision one has to make is how much incremental risk one is willing to accept.

The only way to increase return will be to accept incremental increases in investment risk (uncertainty). The line between the curve-point and the “100% stocks” point is termed the “efficient frontier.” Any point along the efficient frontier represents that unique portfolio that offers the highest return for the given amount of risk.

The Asset Allocation Process

The key goal of the asset allocation process is to develop an asset allocation policy that maximizes the likelihood that an investment portfolio’s assets will, over the planning horizon, fund Plan benefits.

Steps Involved in Setting Asset Allocation Policy

Overview and Planning Steps

1. Review rationale for policy.
 - A. • Importance of diversification
2. Review financial condition of Plan.
 - A. • Assets versus projected liabilities (balance sheet)
 - B. • Projected contributions versus projected benefits

Investment Related Steps

3. Review rationale for investment asset classes in light of plan financial requirements.
4. Develop expectations for asset class investment performance (returns, risks, correlations).
5. Identify investor-specific constraints that might limit investment strategies (e.g., liquidity).
6. Create model portfolios, incorporating objectives, assumptions, and constraints.
7. Isolate investor-specific model portfolio to represent an investor's asset allocation policy.
8. Perform additional sensitivity analyses to quantify impact of specific issues.
 - A. •Adjustments to required rate of return
 - B. •Shift in financial condition of Plan due to funding

Once the rationale for undertaking an asset allocation study is understood, a review of the financial condition of the plan becomes imperative. A key component of reviewing a plan's financial condition is studying the actuarial requirements of the plan. These include the future liabilities and expected cash flow of contributions less benefit payments. For example, over the next decade, CalSTRS expects to see a negative cash flow as more participants retire. These requirements represent the plan's long-term liabilities and, when combined with the plan's investment portfolio, constitute a pension plan's balance sheet.

—Understanding what factors (such as changes in interest rates, benefit structures, and plan demographics) influence these liabilities is important. Changes in these and other underlying factors may, in fact, alter a plan's liability structure. Such shifts could, in turn, impact the plan's financial condition. CalSTRS' were studied and considered as part of this asset allocation review.

Selecting Asset Classes for Portfolio Investment

As discussed earlier, there are three components required to model investment returns: (1) asset class expected returns, (2) asset class risks, and (3) correlations among asset classes. Investment consultants develop these components, which are then used to develop efficient frontiers quantitatively. CalSTRS' current long-term expected returns and risks for various assets classes range from 5.0% to 13.0% per year.

Total Return and Risk Estimates
Assumed inflation level: 3.5% per year
Adopted in 2001.

Asset Class	Expected Annual Return	Expected Risk (Annulzd. SD)
Cash	5.00	1.0
Domestic Bonds	6.25	7.0
U.S. Stocks	9.75	18.0
Non-U.S. Stocks	9.75	22.0
Private Equity	13.00	33.0
Real Estate	8.00	13.0

Correlation among the asset classes:

	US Equity	Fixed Income	Non-U.S. Equity	Private Equity	Real Estate	Liquidity
U.S. Equity	1.00	0.30	0.50	0.60	0.40	0.10
Fixed Income	0.30	1.00	0.10	0.00	0.20	0.50
Non-U.S. Equity	0.50	0.10	1.00	0.40	0.10	0.00
Private equity	0.60	0.00	0.40	1.00	0.15	0.10
Real Estate	0.40	0.20	0.10	0.15	1.00	0.30
Liquidity	0.10	0.50	0.00	0.10	0.30	1.00

These return and volatility estimates reflect several basic relationships:

1. Investors or lenders of capital require an incremental real return premium as a reward for making capital available.
2. Equity-oriented investment should, over long periods, produce return premiums that are higher than their fixed-income counterparts.
3. The return assumptions for the publicly traded asset classes do not account for added value opportunities within each asset class.

Review of Asset Allocation Policy

Over the last fifteen years, CalSTRS' asset allocation policy has shifted modestly.

CalSTRS Asset Allocation Policy Trends (in %)

Asset Class	Long-Term (2005)*	1999	1995	1993	1986
U.S. Equities	38	38	34	33	40
Non-U.S. Equities	20	25	18	18	15
Public Equity	58	63	52	51	55
Real Estate	7	5	5	10	10
Private Equity	8	5	3	7	5
Total Equity	73	73	60	68	70
Global	0	0	5	1	0
Fixed-Income	26	26	34	30	30
Cash	1	1	1	1	0
Stable Assets	27	27	35	31	30
Total	100	100	100	100	100

*- The long-term target was established in October 2001 with the goal of full implementation by the year 2005.

CalSTRS' investment policy has remained consistent from an equity/stable asset allocation viewpoint. In 1986, CalSTRS had a strategic allocation of 70% equities and 30% stable assets. Since 1997, CalSTRS' Board adopted and reaffirmed a policy of 73% equity and 27% stable assets.

STRATEGIC ASSET ALLOCATION

The System's asset allocation strategy utilizes a design for today's needs, while anticipating the future capacity and growth of the investment portfolio. A strategic asset allocation target for public equity, private equity, liquidity, and public debt was last established in 2001 after reviewing a comprehensive asset allocation analysis completed by Pension Consulting Alliance. In conjunction with the strategic target, a range for each asset category has been established to provide flexibility designed to reduce rebalancing costs and allow flexibility to adapt to changing market conditions.

To control the risk and return relationship each asset category should be rebalanced to the strategic target. Rebalancing latitude is important and can significantly affect the performance of the portfolio. Blind adherence to narrow ranges increases transaction costs without a documented increase in performance. A rebalancing range that is too wide may cause undesired changes in the asset allocation. The range is plus or minus three percent around the strategic target for the major asset categories (domestic equity, international equity, and fixed income). The range is plus or minus two percent around the strategic target for the other asset categories (private equity and cash). The two or three percent range refers to the market value of the total investment portfolio.

CalSTRS Policy Target and Ranges

	Long-Term Target	Range
U.S. Equity	38%	35% to 41%
Non-U.S. Equity	20%	17% to 23%
Total Public Equity	58%	52% to 64%
Private Equity*	8%	4% to 10%
Real Estate	7%	4% to -9%
Total Equity	73%	68% to 77%
Fixed Income	26%	23% to 29%
Cash	1%	0% to 3%
Total Public Debt	27%	23% to 32%
Total Asset Allocation	100%	

Please note that the allocated not funded portion of the private equity and real estate will be invested in the U.S. equity portfolio.

To manage the shift to the new allocation targets established in 2001, the Board sets for the following plan. Each asset mix will be used at the end of the respective fiscal year for performance measurement. The respective ranges of +/- three percent for U.S. equity, Non-U.S. equity and fixed income will apply to each year's target. The range for private equity, real estate, and liquidity will be zero to + two percent of the long-term (fiscal year end June 30, 2005) target for the entire plan.

Asset Class	2001	2002 01-02 FY	2003 02-03 FY	2004 03-04 FY	Long-term (2005 04-05 FY)
U.S. Equity	38%	41%	41%	39%	38%
Non-U.S. Equity	25%	21%	20%	20%	20%
Private Equity	5%	5%	6%	7%	8%
Real Estate	5%	6%	6%	7%	7%
Fixed Income	26%	26%	26%	26%	26%
Liquidity	1%	1%	1%	1%	1%

Rebalancing Procedure: The asset mix may deviate from the target as shown above. Deviations greater than described may require rebalancing back to the target within the range. The range around the allocation targets is intended to keep the actual allocation close to the target while minimizing the transactions costs that result from rebalancing.

1. ~~The~~ The Board delegates to the Chief Investment Officer authority to rebalance the asset allocation across asset classes when market values of assets fall outside policy ranges. Rebalancing will be accomplished first using normal cash flows and second through reallocation of assets across asset classes. The timing of the re-balancing will be based on market opportunities and the consideration of transaction costs, and therefore need not occur immediately. The global financial markets and fund conditions are dynamic, not static. ~~Therefore, the~~ optimum re-balancing will depend on market volatility and costs. The above policy ranges are long-term and may deviate in the short-term as a result of funding schedules, interim market movements and market impact costs of implementation.
2. Idle cash will be allocated to asset classes and investment managers based on target allocations.
3. In cases of major rebalancing, the Board authorizes the Chief Investment Officer to shift assets in a timely, prudent, and cost efficient manner to maintain the policy ranges established by the Board. The Board further authorizes the Chief Investment Officer to utilize futures, forward contracts and options for a temporary period, in order to maintain target range exposure in asset classes and to reduce transaction costs that would otherwise be incurred by the buying and selling of actual securities. Major rebalancing can occur to bring asset classes within their target ranges, or when there is transition between investment managers. The CIO will promptly report any major re-balancing to the Board at the next Investment Committee meeting.

4. Rebalance Within Asset Classes: the Board authorizes the Chief Investment Officer to rebalance within each asset class by first using normal cash flows and second through reallocation of assets within asset classes. This reallocation will be based on individual policies and guidelines for each asset class.
5. Because of appraisal valuation and illiquid market nature of appraised assets, exceeding the maximum policy range allocation will trigger a conscious review by the Chief Investment Officer, the specialty and General Consultant, and the Investment Committee rather than automatic rebalancing.

INVESTMENT STRUCTURE

Investment structure guides and directs present and future investment decisions in a prudent manner. The structure is also used by CalSTRS to mitigate the strategic investment risk within the portfolio. Investment related issues addressed included:

1. The relative amount of active and passive management
2. The relative amount of internal and external management
3. The appropriate direct and indirect costs of each asset category
4. The appropriate reporting standards and time horizons

ASSET ALLOCATION STRUCTURE

1. Based on academic studies, it has been determined that 91% of the total return is attributable to the asset allocation decision. Consequently, each asset category shall remain within the tactical range approved in the strategic asset allocation adopted by the Board.
2. Control of the cash flow is critical to the success of long-term investment strategies. Estimated cash flows shall be provided to the Investment Committee annually.
3. Each month the Chief Investment Officer will complete a report identifying the salient aspects of the investments including a section on compliance with approved asset allocation targets.

EQUITY STRUCTURE

1. The U.S. equity portfolio will be managed using both passive (80% target) and active (20% target) strategies. The structure of the active portfolio will follow the general breakout of the Russell 3000 index between large and small capitalization and value and growth characteristics. The passive component may have both internal and external managers. The active component will be managed externally.
2. The non-U.S. equity markets are assumed to be more inefficient, allowing active management to add value. The target will be an equal amount of active management (50%) and passive management (50%) strategies. Emerging markets will be utilized to enhance return and diversification. The passive component may have both internal and external managers. The active component will be managed externally.

FIXED INCOME STRUCTURE

1. The long-term fixed income portfolio shall be comprised of investment grade and non-investment grade securities using an enhanced indexing strategy and an externally managed high yield strategy. The internally managed portfolio will emphasize tracking the risk characteristics of the performance benchmark.
2. Short term fixed income and cash securities, including the cash portion of equity portfolios, shall be managed internally with emphasis on safety and liquidity. The portfolio shall be comprised of investment grade securities, A1/P1 rated short-term debt, and other appropriate securities as approved in the policies and procedures.

ALTERNATIVE INVESTMENT STRUCTURE

1. The alternative investment portfolio will be comprised of limited partnerships and co-investments focusing on commitments to domestic and international partnerships as identified in the Alternative Investment policy. The One of the alternative investment advisors and staff will analyze each partnership and conduct appropriate due diligence with the objective of achieving upper quartile performance, as identified by Venture Economics.
2. Private equity investments have substantial fees and costs, consequently, emphasis will be placed on negotiating, monitoring, and controlling the direct and indirect costs of each limited partnership investment.

REAL ESTATE STRUCTURE

1. The real estate portfolio will be comprised of direct real estate investments, joint venture investments, and commingled funds (opportunistic funds) with adopted targets of 50% to low-risk, 25% to moderate-risk and 25% to high-risk investments.
2. To more closely align the interests of the plan sponsor and real estate manager, emphasis will be placed on negotiating, monitoring, and controlling the cash flow (both income and expense) associated with each property.

REPORTING

On a monthly basis the Chief Investment Officer will prepare a comprehensive report on the investment program to include the asset allocation, movement of assets, System cash flow and market value of each portfolio. Semi-annually, the General Consultant and CIO will preview and present the investment performance of the Systems' investment portfolio.

Approved ~~November 2001~~ July 2002

|

INVESTMENT RESOLUTION

WHEREAS, the Electorate of the State of California in November, 1992 amended Section 17 of Article XVI of the State Constitution by approval of Proposition 162; and

WHEREAS, the Teachers' Retirement Board embraces the concepts of the revised Section 17 of Article XVI of the State Constitution, which states that the Retirement System shall have sole and exclusive fiduciary responsibility over the assets of the public pension or retirement system, a copy of which is attached and incorporated in this Resolution; and

WHEREAS, the Teachers' Retirement Board has approved the Investment Plan which provides for wider diversification of the System's investment assets; and

WHEREAS, the Teachers' Retirement Board on the advice of its consulting actuary and the pension fund consultant has adopted the objective of achieving a long term annualized investment return of 3.50% in excess of the rate of inflation; and

WHEREAS, in the exercise of its fiduciary responsibilities the Board has considered and approved various classes of investments for the Teachers' Retirement Fund; therefore it is

RESOLVED, that the following investment classes are authorized if deemed prudent at the time of purchase:

Fixed-Income Securities

Dollar denominated fixed income securities as authorized by the Investment Management Plan and Fixed Income Portfolio Policy Manual, including, but not limited to:~~bonds, notes and other debt obligations issued by:~~

U.S. Treasury (direct or guaranteed)

U.S. Government Agencies

U.S. Government-Sponsored Corporations;

U.S. corporations (including convertible obligations and private placements not registered with the Securities and Exchange Commission) ~~rated "BBB" or higher by S&P or Moodys or an equivalent credit rating agency. Unrated securities, including private placements, may be authorized by the Chief Investment Officer up to a limit of 5% of the total Fund;~~

Government securities issued by countries contained in the Salomon Brothers World Government Bond Index;

Non U.S. corporate issues rated "A" or higher by S&P or Moodys or an equivalent credit rating agency in countries contained in the Salomon Brothers World Government Bond Index.

~~Non dollar denominated bonds, notes and other debt obligations:~~

~~Government securities issued by countries contained in the Salomon Brothers World Government Bond Index;~~

~~Non U.S. corporate issues rated "A" or higher by S&P or Moodys or an equivalent credit rating agency in countries contained in the Salomon Brothers World Government Bond Index.~~

Mortgage Loans

- (1) Notes secured by first mortgages or Deeds of Trust on single family residential property located in the United States if issued by or through a U.S. Government program such as GNMA, FHA, VA, FNMA and FHLMC; or

Originated, issued and serviced by banks, savings and loan associations or mortgage bankers. ~~Such obligations to have a maximum loan to value ratio of 95% provided that:~~

~~If the loan to value ratio exceeds 80%, private mortgage insurance will be obtained to reduce the effective loan to value ratio to a maximum of 75%.~~

- (2) Notes secured by first mortgages or other senior encumbrances on suitable commercial, industrial and multi-family properties located in the United States which are insured through a U.S. Government program, or if not insured, meet the standards and specifications as approved by the Retirement Board.

Equity Securities

All equity securities, including listed securities that exhibit characteristics of equity securities traded on the local market(s).

Derivatives including but not limited to stock futures and options contracts, warrants, convertible securities, and swap agreements.

~~Dollar denominated equity securities:~~

Domestic equity securities consisting of all stocks domiciled in the U.S. plus eligible securities including ADRs of international securities traded on the U.S. and Canadian exchanges;

Shares of diversified management investment companies (Mutual Funds) registered under the Investment Company Act of 1940, provided they are classified as equity funds;

Units of participation in commingled Index Funds or trusts;

Non dollar denominated equity securities:

International securities consisting of issues traded on the exchanges of all countries ~~contained in the MSCI World Index and the MSCI Emerging Markets Index.~~

NOTE: Provided that equity investments in any one company may not exceed 15% of the common stock shares outstanding and that no single common stock investment may exceed 2% of the assets of the Teachers' Retirement Fund based on cost.

Real Estate

Real Property investments as authorized by the Investment Management Plan and Real Estate Policies and Procedures.

Alternative Investments

Limited partnership investments in equity of fixed income securities as defined in the Alternative Investment Policies and Procedures and as authorized by the Investment Committee to include but not limited to:

Venture Capital Funds

Mezzanine Funds

LBO/MBO Funds

Other Investments

Purchase of other types of investments may be made only with advance approval of the Investment Committee of the Teachers' Retirement Board, including, but not by way of limitation:

Stock options (other than covered options), futures contracts in stocks, index funds and fixed-income securities, and interest rate futures;

Advance approval of the Investment Committee or its designates may be obtained by authorization for individual securities, or for a particular class of investments, or for specified investment managers of the Teachers' Retirement Fund;

RESOLVED further that all investments shall be made with the standards of care, skill, prudence and diligence prescribed in the revised Section 17 of Article XVI of the State Constitution. These tests will involve, importantly, full consideration of proper diversification of investments, adequacy of reliable information for analysis of investments, and suitability for the requirements of the Teachers' Retirement Fund. The Board endorses the principle that prudence of individual investments shall be judged in the context of the total Retirement Fund portfolio;

RESOLVED further, that cash reserves of the System are to be managed for the safety and convenience of the Teachers' Retirement Fund, in investments which are considered to be prudent money market instruments by internal investment managers;

RESOLVED further, that the services of at least one external independent organization (performance evaluator) will be retained to assess the investment results of portfolio managers and to compare such results with those of similarly situated institutions and such other standards of measurement as the Investment Committee deems appropriate;

RESOLVED further, that investments now held which no longer qualify for purchase under this Resolution may be retained if qualified under the Resolutions existing at their respective dates of acquisition;

RESOLVED further, that this Investment Resolution rescinds and replaces all previously adopted Investment Resolutions.

Adopted by the Teachers' Retirement Board on October 19, 1984

Revised on April 19, 1985

Revised on December 19, 1986

Revised on September 9, 1993

Revised on May 11, 1994

Revised July 10, 2002

ATTACHMENT A

Article XVI, Section 17 of the State Constitution

Sec. 17. The State shall not in any manner loan its credit, nor shall it subscribe to, or be interested in the stock of any company, association, or corporation, except that the State and each political subdivision, district, municipality, and public agency thereof is hereby authorized to acquire and hold shares of the capital stock of any mutual water company or corporation when the stock is so acquired or held for the purpose of furnishing a supply of water for public, municipal or governmental purposes; and the holding of the stock shall entitle the holder thereof to all of the rights, powers and privileges, and shall subject the holder to the obligations and liabilities conferred or imposed by law upon other holders of stock in the mutual water company or corporation in which the stock is so held.

Notwithstanding any other provisions of law or this Constitution to the contrary, the retirement board of a public pension or retirement system shall have plenary authority and fiduciary responsibility for investment of moneys and administration of the system, subject to all of the following:

(a) The retirement board of a public pension or retirement system shall have the sole and exclusive fiduciary responsibility over the assets of the public pension or retirement system. The retirement board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt deliver of benefits and related services to the participants and their beneficiaries. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system.

(b) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.

(c) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

(d) The members of the retirement board of a public pension or retirement system shall diversity the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.

(e) The retirement board of a public pension or retirement system, consistent with the exclusive fiduciary responsibilities vested in it, shall have the sole and exclusive power to provide for actuarial services in order to assure the competency of the assets of the public pension or retirement system.

(f) With regard to the retirement board of a public pension or retirement system which includes in its composition elected employee members, the number, terms, and method of selection or removal of members of the retirement board which were required by law or otherwise in effect on July 1, 1991, shall not be changed, amended, or modified by the Legislature unless the change, amendment, or modification enacted by the Legislature is ratified by a majority vote of the electors of the jurisdiction in which the participants of the system are or were, prior to retirement, employed.

(g) The Legislature may by statute continue to prohibit certain investments by a retirement board where it is in the public interest to do so, and provided that the prohibition satisfies the standards of fiduciary care and loyalty required of a retirement board pursuant to this section.

(h) As used in this section, the term "retirement board" shall mean the board of administration, board of trustees, board of directors, or other governing body or board of a public employees' pension or retirement system;

provided, however, that the term "retirement board" shall not be interpreted to mean or include a governing body or board created after July 1, 1991 which does not administer pension or retirement benefits, or the elected legislative body of a jurisdiction which employs participants in a public employees' pension or retirement system.

PROPOSED
RESOLUTION OF THE
TEACHERS' RETIREMENT BOARD
INVESTMENT COMMITTEE

SUBJECT: Investment Policy – Revised Investment Policy and Management Plan and
Investment Resolution

WHEREAS, the Investment Committee of the California State Teachers' Retirement Board is responsible for recommendation to the Board, investment policy and overall investment strategy for the management of the Teachers' Retirement Fund, a multi-billion dollar public pension plan; and

WHEREAS, the Investment Committee is charged with developing the Fund's Investment Policies and Management Plan and Investment Resolution; and

WHEREAS, the Chief Investment Officer has presented to the Investment Committee an updated Investment Management Plan reflecting expanded risk standards and the new benchmarks previously approved by the Investment committee; and

WHEREAS, the Chief Investment Officer has presented to the Investment Committee an updated Investment Resolution, adopted in October 1984, and last revised in May 1994. Therefore be it

RESOLVED, that the Investment Committee adopt the revised CalSTRS Investment Policy and Management Plan and Investment Resolution.

Adopted by:
Investment Committee
on July 10, 2002

Jack Ehnes
Chief Executive Officer